

METHOD OF STORING AND SUPPLYING HYDROGEN
TO A PIPELINE

Abstract

A method of storing and supplying a gaseous hydrogen product to a pipeline under a product purity specification in which a hydrogen stream made up of gaseous hydrogen is compressed to form a compressed hydrogen stream and introduced into a salt cavern for storage. A crude hydrogen stream, contaminated from storage in the salt cavern is recovered and purified by sufficiently removing at least carbon dioxide and water vapor to produce a hydrogen product stream having an impurity level at or below the product purity specification. The hydrogen product stream is supplied back to the pipeline. Alternatively, during periods of low demand, hydrogen produced by a production facility is both purified and supplied to the pipeline and stored in the salt cavern. During high demand period, both the output of the production facility and hydrogen retrieved from the salt cavern are purified and supplied to the pipeline.